Appl. No. 10/662,793

Prel. Amdt. dated October 24, 2003

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-14 (canceled).

Claim 15 (new). A switching converter, comprising:

a switch including a control terminal, a first load terminal, and a second load terminal;

a rectifier configuration connected to said switch, said rectifier configuration including a plurality of output terminals for providing an output voltage to a load;

a controller configuration for providing a control signal dependent on the output voltage; and

a drive circuit for generating a plurality of identical drive pulses having a frequency dependent on the control signal;

said plurality of drive pulses for turning said switch on and off.

Claim 16 (new). The switching converter according to claim 15, wherein said drive circuit is configured for generating the plurality of drive pulses with an identical duration and at an identical time interval depending on whether the control signal is greater or less than a reference signal.

Claim 17 (new). The switching converter according to claim 15, wherein said controller configuration includes a proportional controller, a proportional-integral controller, or an integral controller.

Claim 18 (new). The switching converter according to claim 15, wherein said drive circuit includes a clocked comparator configuration being fed with the control signal, a first reference signal and a clock signal.

Claim 19 (new). The switching converter according to claim 18, wherein:

the clock signal has a timing;

said clocked comparator configuration generates the plurality of drive pulses if the control signal is greater than the first reference signal; and

the plurality of drive pulses each have a predetermined time duration and a timing corresponding to the timing of the clock signal.

Claim 20 (new). The switching converter according to claim 15, wherein said controller configuration is a digital controller configuration providing a discrete-time control signal.

Claim 21 (new). The switching converter according to claim 20, wherein:

said drive circuit includes a digital comparator configuration and a pulse shaping filter connected downstream of said digital comparator configuration; and

said pulse shaping filter has an output for providing the plurality of drive pulses.

Claim 22 (new). The switching converter according to claim 15, wherein said controller configuration includes a noise shaping filter being fed with a signal dependent on the output voltage.

Claim 23 (new). The switching converter according to claim 15, further comprising:

a level converter having an input being fed with the plurality of drive pulses and an output connected to said control terminal of said switch.

Claim 24 (new). The switching converter according to claim 15, wherein said rectifier configuration includes a coil connected in series with said switch.

Claim 25 (new). A method for driving a switch in a switching converter having a rectifier configuration connected to the switch, the method which comprises:

generating a control signal dependent on an output voltage provided by the rectifier configuration; and

generating a drive signal with a sequence of identical drive pulses having a frequency dependent on the control signal.

Claim 26 (new). The method according to claim 25, which comprises:

providing the control signal with a signal component formed by integrating a differential signal made from a signal proportional to the output voltage and a reference signal.

Claim 27 (new). The method according to claim 25, which comprises:

providing the control signal with a signal component proportional to the output voltage.

Claim 28 (new). The method according to claim 25, which comprises forming the drive pulses with a timing of a clock signal depending on whether the control signal is greater or less than a reference value.

Drawing Amendments:

Fig. 1: The labels, control arrangement, drive circuit, clocked comparator, M and optocoupler, have been added. L1 and L2, which were illustrated as black boxes, are now illustrated using the symbols for the inductances of a transformer.

Resistors R1, R2, and RL are now illustrated using the symbol for a resistor. A lead-line has been associated with the label AS1.

Fig. 2: No changes

Fig. 3: The labels, comparator, delay element, RS flip-flop, and pulse shaper, have been added. A lead-line has been associated with the label K.

Fig. 4: No changes:

Fig. 5: The label amplifier has been added.

Fig. 6: The labels, amplifier and integrators, have been added. Lead-lines have been associated with IN1 and IN2.

Fig. 7: The labels, sampling device, adder, control arrangement, comparator arrangement, pulse shaper, drive circuit, level converter (2 occurrences), M and rectifier

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arrangement, have been added. Resistor RL is now illustrated using the symbol for a resistor and inductor L3 is illustrated using the symbol for an inductor. Lead-lines have been associated with the labels PW1 and PW2.

Attachments: 5 Replacement sheets

5 Annotated sheets showing changes